

Aspect Industrial Estate IVE Printing and Packaging Facility (WH8) – Waste Management Plan

A Submission to IVE Group c/o Mirvac

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Aspect Industrial Estate: Warehouse 8 – Waste Management Plan

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Disclaimer

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In the spirit of reconciliation MRA Consulting Group acknowledges the Traditional Custodians of Country throughout Australia and their connection to land, sea and community. We pay our respects to Aboriginal and Torres Strait Islander peoples and to Elders past, present and emerging.

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Glossary

Terminology	Definition
AS	Australian Standard
C&D	Construction and Demolition
C&I	Commercial and Industrial
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DA	Development Application
DCP	Development Control Plan
ENM	Excavated Natural Material
EPA	Environment Protection Authority
LGA	Local Government Area
MGB	Mobile Garbage Bin
MRA	MRA Consulting Group
MRPDCP	Mamer Road Precinct Development Control Plan 2021
MSW	Municipal Solid Waste
PLEP	Penrith Local Environmental Plan 2010
PDCP	Penrith Development Control Plan 2014
SEPP	State Environmental Planning Policy
SSD	State Significant Development
WH8	Warehouse 8
WMP	Waste Management Plan
WSA	Western Sydney Aerotropolis
WSEA	Western Sydney Employment Area
WSP	Waste Service Provider
WSRA	Waste Storage and Recycling Area

1 Introduction

MRA Consulting Group (MRA) was engaged by IVE Group c/o Mirvac to assist with the provision waste consultancy services related to the proposed concurrent modification application to the Concept Approval, SSD-10448 (MOD 10) and an SSD-80331959 for the fit-out and use of the approved Warehouse 8 (WH8) building for the purposes of 'printing' at the Aspect Industrial Estate (AIE) site. The site located at 4 Pemul Place, Kemps Creek and is situated in the Penrith City Council Local Government Area (LGA).

This WMP is prepared with consideration to the Penrith Development Control Plan 2014 (PDCP), including the Mamre Road Precinct DCP 2021 (MRPDCP), suitable for SSDA submission to the Department of Planning, Housing and Infrastructure (DPHI).

The PDCP and MRPDCP lists the following objectives related to waste management, which have each been addressed in this WMP:

- a) To facilitate sustainable waste management in accordance with ESD principles.
- b) To manage waste in accordance with the 'Waste Hierarchy' to:
 - Avoid producing waste in the first place;
 - Minimise the amount of waste produced;
 - Re-use items as many times as possible to minimise waste;
 - Recycle once re-use options have been exhausted; and
 - Dispose of what is left, as a last resort, in a responsible way to appropriate waste disposal facilities.
- c) To achieve waste minimisation targets as set out in the NSW Waste and Sustainable Materials Strategy 2041 via methods such as increasing recycling rates and having an 80% average resource recovery rate from all waste streams by 2030.
- d) To support the circular economy in line with the NSW Circular Economy Policy Statement.

2 Background

2.1 Description of the Proposed Development

The proposal relates to a concurrent modification application to the Concept Approval, SSD-10448 (MOD 10) and an SSDA for the fit-out and use of the approved Warehouse 8 building for the purposes of 'printing' operations as a form of 'other manufacturing industries'. The proposed modification and SSDA seeks to facilitate tenant operations at Warehouse 8, constituting IVE Group packaging and print operations.

The project comprises two components separately described below.

Concept Modification to SSD-10448 (MOD 10)

- Modify the Estate wide concept plan, including site layout, parking and landscaping. This includes an updated quantum of parking at Warehouse / Lot 8 to a total of 360 parking spaces to meet the proposed operational requirements (see Appendix A).

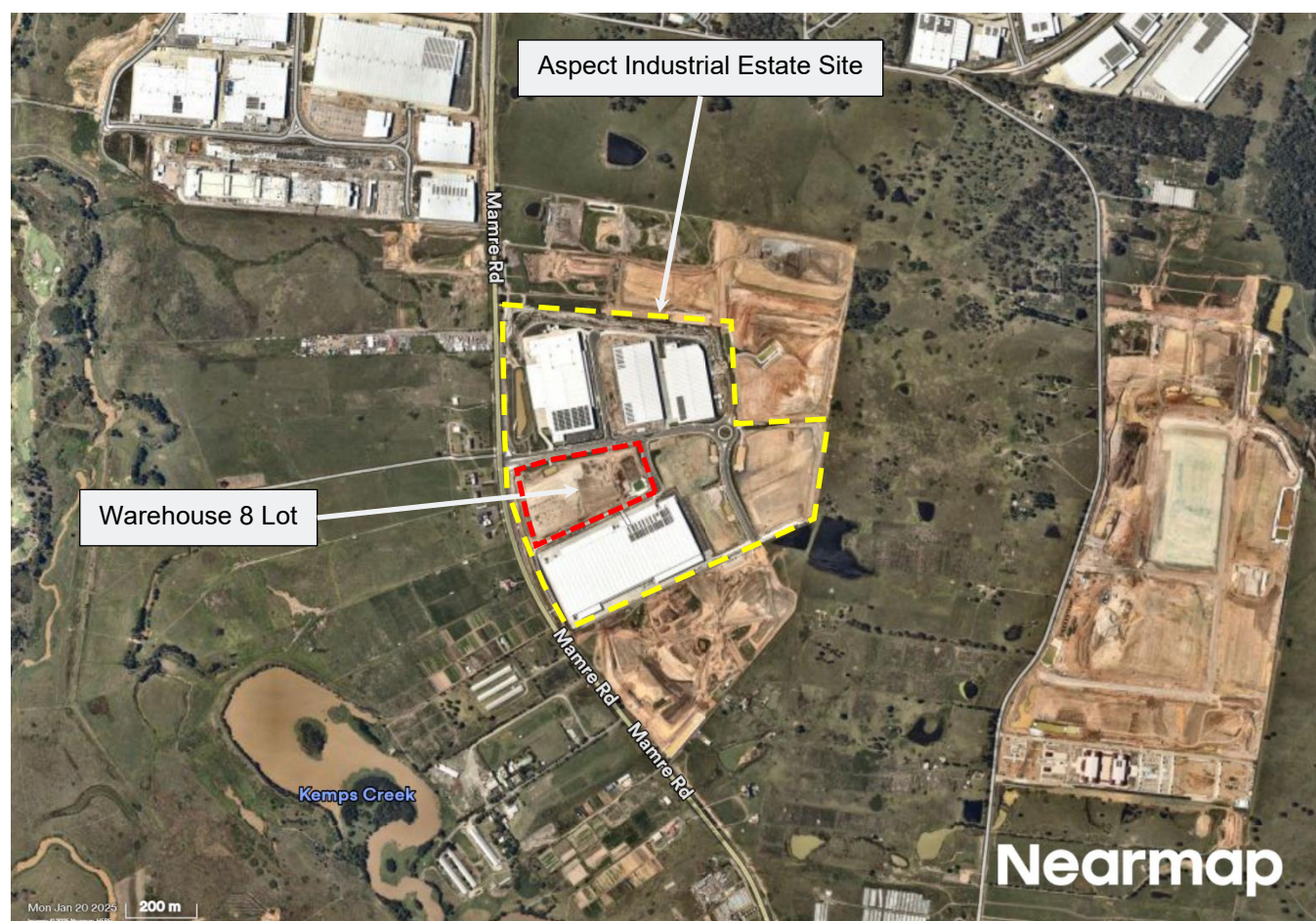
Fit-Out and Use SSDA

- Approval for 'printing' operations as a form of 'other manufacturing industries', land use at Warehouse / Lot 8.
- Approval for fit-out works to facilitate the IVE Group packaging and print operations (see Appendix B).

As it relates to the proposed fit-out and use of WH8, various manufacturing and printing elements will be required to operate the site, including:

- Acceptance and dispatch areas,
- Raw material storage,
- Conventional and digital printing equipment,
- Folding, packing and finishing,
- Specialist phototyping and plate making equipment, and
- Ancillary use features such as offices and waste management area.

Figure 1: Site and surrounding area



Source: Near Maps, 2025.

2.2 Strategies

Waste management for the site considers better practice, necessary equipment, and integration with other guidance documents including the NSW Waste and Sustainable Materials Strategy (NSW EPA, 2021), and National Waste Policy: Less Waste, More Resources (DAWE, 2018). The key policy aims that are considered are:

- Avoidance (to prevent the generation of waste);
- Reduce the amount of waste (including hazardous waste) for disposal;
- Manage waste as a resource; and
- Ensure that waste treatment, disposal, recovery and re-use are undertaken in a safe, scientific and environmentally sound manner.

Management of waste generated onsite according to directives of the NSW Strategy will assist in achieving the target of 80% diversion from landfill in the C&D sector.

Specifically, the development will support the NSW Waste and Sustainable Materials Strategy (NSW EPA, 2021) by:

- Provision of skip bins for separating residual and recyclable materials during construction to avoid illegal dumping
- The use of pre-fabricated materials to reduce waste so that any excess materials from construction can be recovered or reused.
- Proper sizing of the waste storage area and bins to promote better material segregation to combat illegal dumping and increase diversion from landfill
- Proper management of hazardous materials and waste

2.3 Assumptions

This report is a Waste Management Plan (WMP), forming part of the development documentation and assumes:

- Drawings and information that have been used in waste management planning for this WMP are the final design set for the development plan from the project architect, SBA Architects, 11/02/2025;
- Waste and recycling volumes are based on information provided from the MRPDGP 2021; and
- This WMP is a living document and therefore, waste management equipment and systems described in this report are subject to change based on future operations and available technology.

3 Construction and Demolition

Construction and demolition activities associated with the development of the site will generate a range of wastes, commonly referred to as Construction and Demolition (C&D) waste. Throughout the development process, all materials generated on site will be reused and recycled where possible, minimising the disposal (landfilling) of materials other than those that are contaminated or unsuitable for reuse or resource recovery. All waste materials removed from the site must only be directed to a waste management facility or premises lawfully permitted to accept the materials.

Waste storage of C&D waste during construction and demolition operations will involve stockpiling of excavated and reusable material, and placement of skip bins for separation of mixed C&D materials for recycling. A skip bin for residual waste or contaminated material will also be made available at the site for disposal where necessary. Skip bins may require alternative placement during construction operations as space becomes restricted, to facilitate safe and efficient storage of materials. Skip bins and stockpiles should be placed within property boundaries to avoid illegal dumping.

The quantities, densities and bulking factors for waste and recyclables will differ on site based on actual materials and handling practices employed. Demolition and excavation waste estimations have been addressed separately to construction waste estimations for the proposed development, to better inform resource recovery opportunities for waste material generated during each stage of the development.

C&D waste storage areas will be kept clear and tidy to maintain vehicular access, encourage separation of waste materials and for WHS reasons. Site waste management principles and facilities will be a focus for the induction of all construction or other contractors working at the site.

3.1 Demolition Waste

Demolition has been addressed for the site as part of the Stage 1 State Significant Development Application (SSDA).

No additional site preparation or demolition works are expected to be required to accommodate works to establish the WH8 development and therefore, demolition waste has not been addressed in this report.

3.2 Construction Waste

Construction activities for the proposed development will involve the construction of the WH8 building shell, as well as the installation of printing equipment required for the proposed use of WH8. The proposed alterations to the masterplan, as it relates to the WH8 shell will not substantially change the built form of the main building and will include substantial additional carparking provision compared to the approved arrangement.

Table 1 outlines the approved compared to proposed area and carparking provision for WH8 and summarises their difference for the purpose of review.

Table 1: Site area and aspect comparison (approved and proposed)

Aspect / Area	Approved WH8 Development Scheule	Proposed WH8 Development Schedule	Difference
Site Area	75,710m ²	75,710m ²	Unchanged
Office Area	1,150m ²	2,370m ²	1,220m ²
Warehouse Area (incl. store rooms)	40,200m ²	40,260m ²	+60m ²
Total GFA	41,350m ²	42,630m ²	+1,280m ²
Carparking (total)	181 spaces	360 spaces	+179 spaces

Given the differences highlighted in Table 1, the overall change to the GFA and built form are minimal (less than 5% increase in GFA) and proposed additional parking spaces will take up previously designated open hardstand area, therefore resulting in no greater construction impact to the site. As such, the expected material volumes and

provisions approved for the management of construction waste for WH8 are expected to remain valid for the proposed modification to the concept masterplan.

Proposed internal fit out works for WH8 will consist mostly of installation of equipment and use of pre-fabricated materials and therefore, any damaged, offcut or surplus materials are expected to be able to be recovered by manufacturers for reuse.

Through the construction phase of the proposed development, a waste storage area shall be designated by the construction contractor and shall be sufficient to store the various waste streams expected during operations. Waste storage areas will be kept clear to maintain access and shall also be kept tidy to encourage separation of waste materials and for WHS reasons. The waste storage area will retain multiple bins to allow for source separation of waste to allow for ease of recovery and reuse of materials.

Waste management principles, management measures and facilities in use on the site shall be included as part of the site induction for all personnel working on the site. Table 2 outlines indicative volume to weight conversion factors for common construction materials.

Table 2: Indicative volume to weight conversion factors for common construction materials

Building waste material	Tones per m ³	Waste as % of the total material ordered
Soil/aggregate	1.4 – 1.6	–
Bricks	1.2	5–10%
Concrete	1.5	3–5%
Tiles/ceramics	0.5 – 1	2–5%
Timber	0.3	5–7%
Plasterboard	0.2	5–20%
Metals	0.15 – 0.9	–

Source: Green Building Code of Australia C&D Waste Criteria.

3.3 Waste Contractors and Facilities

To ensure best practice waste management, appropriate contractors and facilities have been proposed based on their location and service offerings (Table 3).

Table 3: Waste service contractors and facilities

Role	Details
Recommended Waste Collection Contractor	<p>The following are local skip bin operators for consideration in the management of excavation and construction waste for the site:</p> <ul style="list-style-type: none"> • Transwaste Skips; • Orange Skip Bins; • Phillips Skip Bins; • BinsExpress Skip Bins; • Bingo Bins; or <p>Or another supplier as elected by the building contractor.</p>

Role	Details
Principal Off-Site Recycler	The following are local C&D processing facilities for consideration in the management of C&D waste generated at the site: <ul style="list-style-type: none"> • Brandown Quarries Kemps Creek; • Cleanaway Kemps Creek Resource Recovery Centre; • Bingo St Marys; • Bingo Eastern Creek; or another appropriate facility as elected by the waste management contractor.
Principal Licensed Landfill Site	Bingo Eastern Creek, or other appropriate facility as elected by the waste management contractor.

3.4 Site Documentation

This WMP will be retained on-site during the construction phases of the development, along with other waste management documentation (e.g. contracts with waste service providers).

Responsibility for the WMP, waste documentation and processes during the excavation and construction phases will be with the site manager or builder.

A logbook that records waste management and collection will be maintained on site, with entries including:

- Time and date of collections;
- Description of waste and quantity;
- Waste/processing facility that will receive the waste; and
- Vehicle registration and company name.

Waste management documentation, the logbook and associated docket and receipts must be made available for inspection by an authorised Council Officer at any time during site works.

4 Operational Waste Management

4.1 Overview

The concept masterplan for the broader AIE site, including WH8 have previously been assessed generally as it relates to potential operational waste management requirements for future occupation of the building. Since this proposal seeks specific approval for the fit-out and use of the WH8 building for industrial printing, this Section addresses the specific use of WH8 by IVE for this specific purpose.

Waste management strategies related to site operations have been established according to Section 4.5 of the Mamre Precinct Development Control Plan 2021.

The following space calculations are based off the mobile garbage bin (MGB) and bulk bin dimensions sourced from NSW EPA's *Better Practice Guide for Resource Recovery in Residential Developments* (2019) (Table 4).

Table 4: Mobile Garbage Bin (MGB) and Bulk Bin capacity and footprint

Bin Capacity (L)	Height (mm)	Depth (mm)	Width (mm)	Footprint (Approx. m ²)
120	940	560	485	0.30 - 0.33
240	1,100	735	580	0.41 - 0.43
660	1,250	850	1,370	0.86 - 1.16
1,100	1,470	1,245	1370	1.33 - 1.74
1.5m ³	910 – 1,250	905 – 1,000	1,805 – 2,010	1.63 - 2.01
3m ³	1,020 – 1,580	1,400 – 1,700	1,400 – 2,010	2.1 - 3.4
4.5m ³	1,440 – 2,014	1,605 – 1,900	1,800 – 2,010	2.9 - 3.8
6m ³	1,650	1,900	2,000	3.8

Source: NSW EPA's *Better practice guide for resource recovery in residential developments* (2019).

4.2 Waste Generation

Operational waste management addressed in the following section relates to waste generation associated with the industrial printing use. Waste generation rates have been calculated by extrapolating waste volumes from existing operations from a similar use operated by IVE located in Granville, Silverwater and Homebush. These sites are relocating to Kemps Creek which current operations will use the waste room.

IVE have provided a comprehensive summary of waste generation volumes generated at their existing site and advised MRA that the proposed development at AIE WH8 is expected to generate approximately 30% less waste than the site where waste data is derived.

In addition, standard water re-use onsite is captured as part of the Civil Infrastructure Report. Therefore, no wastewater is generated in IVE's operation.

4.2.1 Existing Waste Volumes

The waste volumes and details outlined in Table 5 have been sourced from IVE's existing industrial printing site located at Granville, Silverwater and Homebush. The site has a similar use to the proposed development and would operate similar equipment, therefore generating the same types of wastes.

Table 5: Existing Waste Generation Volumes from IVE Kemps Creek Site

Total Combined Monthly Waste - Kemps Creek								
item	Removal method	Process method	BA NSW p/mth Tonnes	PNSW Volume p/mth Tonnes	CX&D NSW Volume p/mth Tonnes	Waste Disposal Supplier	Notes	Total Volume p/mth Tonnes
Liquid	IBC	Thermal treatment	1.5	1.00	0	EVORO	EPA approved liquid filtered and filtration burn	2.50
wash cloths	200lt drum	Thermal treatment	0.07	0	0	EVORO	EPA approved filtration burn	0.07
Waste ink	200lt drum	Thermal treatment	0.22	0.20	0	EVORO	EPA approved filtration burn	0.42
General & wet waste	30cube & 3cube Hook bin	Landfill	34.8	3.00	3.93	WASTEFLEX	General waste includes PVC's and kitchen waste	41.73
Rags	Drum	Landfill	0.00	0.00	0.01	EVORO	Landfill	0.01
Paper & Cardboard	30cube Hook bin & compactor	Recycled	37.83	72.10	37.22	WASTEFLEX	combined paper & board	147.15
Timber	30cube Hook bin	Recycled	1.23	2.60	0	WASTEFLEX	Intact timber pallets reused & damaged pallets chipped	3.83
Plastic Ink containers	Open-top IBC	Recycled	0.07	0	0	EVORO	WFD ink containers acid washed, shredded & recycled	0.07
UV Lamps	boxes	Recycled	0.01	0	0	EVORO	Metal and Mercury separated and recycled	0.01
Metal	3 cube Hook bin	Recycled	0.59	2.30	0	WASTEFLEX	Metal plates collected and recycled	2.89
Comingled	240lt Wheelie bins	Recycled	0.05	0	0.23	WASTEFLEX	Bottles, cans and cardboard containers recycled	0.28
Plastic	Compacted	Recycled	0.05	0	3.24	WASTEFLEX	Elephants foot on-site to compress and recycle	3.29
Polypropylene	Boxes	Recycled	0.89	0	0	COREX	Corex collection	0.89
Thermal treatment								2.99
Landfill								41.74
Recycled								158.41

4.2.2 Expected Waste Volumes

Noting that IVE has anticipated the proposed development to produce 30% less waste than those volumes detailed above, the waste volumes outlined in Table 6 are estimated to be generated through operation of the proposed use. Waste volumes are inclusive of all proposed uses of the site, including the industrial operation and ancillary functions such as staff amenities and site offices.

Table 6: Estimated Operational Waste Volumes

Waste Stream / Material Type	Disposal or Recycling Method	Volume per month (t)
Liquid	Thermal treatment	1.75
wash cloths	Thermal treatment	0.5
Waste ink	Thermal treatment	0.3
General & wet waste	Landfill	~30
Rags	Landfill	0.01
Paper & Cardboard	Recycled	103
Timber	Recycled	2.7
Plastic Ink containers	Recycled	0.05
UV Lamps	Recycled	0.01
Metal	Recycled	2.05
Comingled	Recycled	0.2
Plastic	Recycled	2.3
Polypropylene	Recycled	0.65

4.3 Waste Storage and Servicing Requirements

On the basis of waste generation estimates outlined in Table 6, Table 7

Table 7: Proposed waste storage and servicing requirements

Waste Stream / Material Type	Proposed Storage Method	Approximate Storage Area Required (m ²)	Collection Frequency and Method
Liquid	IBCs (Approx. 1.2m x 1m each)	3m ²	Monthly
wash cloths	4-6 x 200lt drums (approx. 600mm diameter each)	6m ²	Monthly
Waste ink	1-2 x 200lt drums (approx. 600mm diameter each)	2m ²	Monthly

Waste Stream / Material Type	Proposed Storage Method	Approximate Storage Area Required (m ²)	Collection Frequency and Method
General & wet waste	30m ³ Hook bin (approx. 6.5m x 2.5m) + 3m ³ Bulk Bin (approx. 3.4m)	20m ²	Weekly bulk bin collection Monthly hook bin collection
Rags	Drums	1m ²	Monthly or as required
Paper & Cardboard	30m ³ Hook bin / compactor (approx. 6.5m x 2.5m)	16.25m ²	Weekly
Timber	30m ³ Hook bin (approx. 6.5m x 2.5m)	16.25m ²	Monthly or as required
Plastic Ink containers	Open-top IBC	1m ²	Monthly or as required
UV Lamps	Boxes	1m ²	Monthly or as required
Metal	3 cube Hook bin	3.5m ²	Monthly or as required
Comingled	2-4 x 240L bins	2m ²	Weekly or fortnightly
Plastic	Compacted bales	4m ²	Monthly
Polypropylene	Boxes	4m ²	Monthly or as required
Total approximate storage footprint		80m ²	-
Total Approx. Storage Area Required*		160m²	-

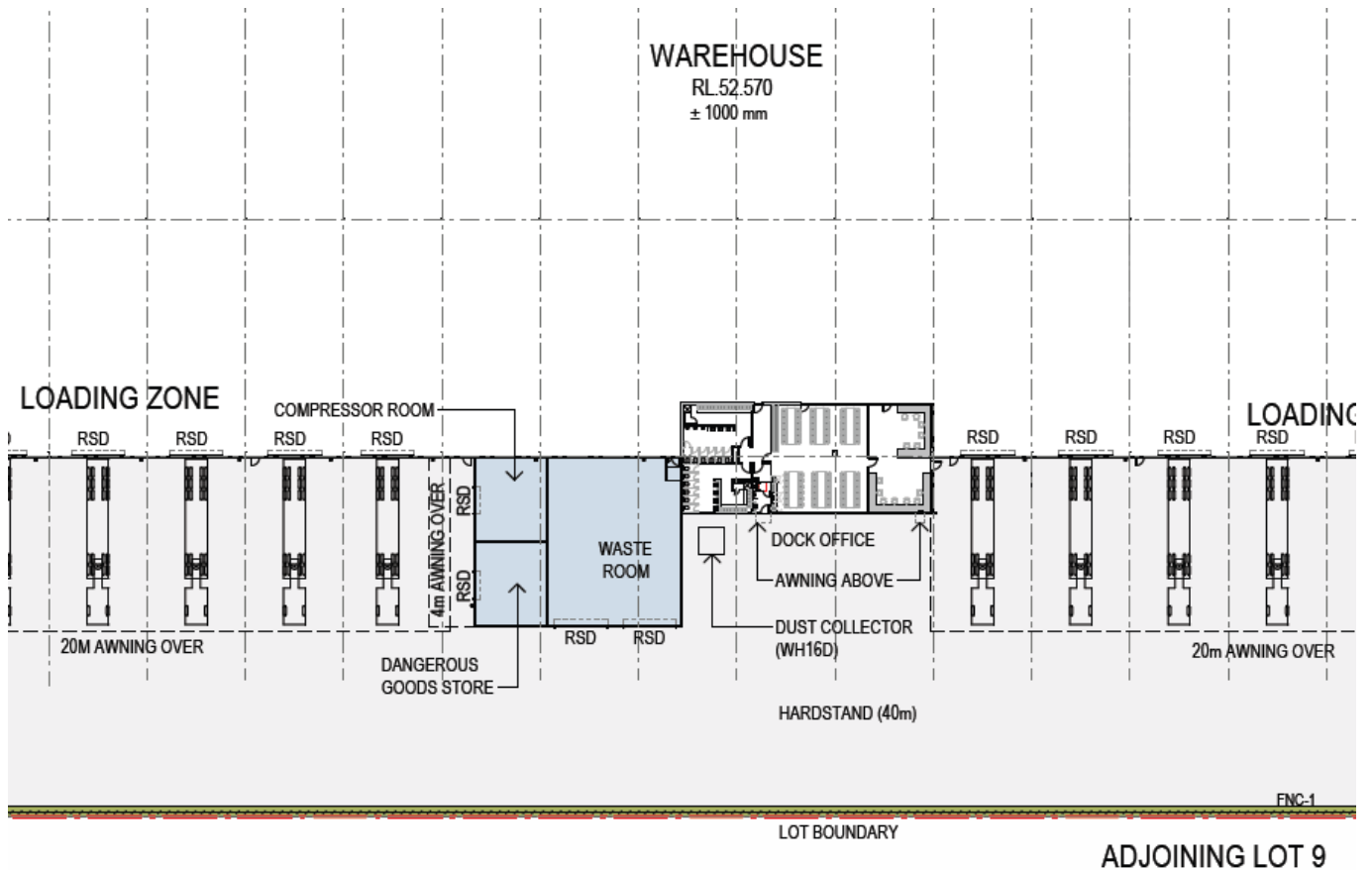
**Total area includes space for manoeuvring of trucks and handing of storage containers. A factor of 2x is applied to the footprint outlined in the table above.*

A combination of mobile garbage bins, bulk bins, compactors/hook lift bins, drums, IBCs and compacted bales have been utilised by IVE at other similar sites. These methods are tested and proven to be effective at managing the types and quantity of waste generated at existing IVE sites and are expected to be the suitable for the management of waste streams generated from operation of the proposed development.

The managing staff operating the proposed development can observe the fullness of bins and other waste storage containers once the site is fully operational and adjust the number of collections, size of storage containers or number of storage containers according to actual need.

An industrial waste storage room has been provided adjacent to the dock office of approximately 295m² in size (see Figure 2). The space provided is sufficient in accommodating space for the infrastructure detailed in the table above and provides flexibility for changes to the waste management arrangement in future, if required.

Figure 2: WH8 Waste Storage Area



Source: SBA Architects, 2025.

4.3.1 Temporary/Interim Waste Storage

Interim containers within retail, offices and active operational areas will be available, sufficient for interim storage of waste materials equivalent to one day's generation of these materials which can then be transferred to the main waste storage area for consolidation at the end of each day.

Site personnel will be responsible for the emptying of these bins and containers daily and transporting materials to the site's waste storage area.

5 Waste Management Systems

5.1 Waste Management System Summary

The following specific management methods are proposed for the various collection waste streams expected to be generated at the site, including alternative waste streams outside of general waste recycling:

- **Waste:** General waste shall be placed within a tied plastic bag prior to transferring into the general waste bin or waste compactor. Receptacles will be situated in each designated waste management and storage area for individual industrial units;
- **Commingled recyclables:** All recyclables will be stored in commingled bins (including paper, cardboard, mixed plastic, glass, aluminium, steel). All recyclables should be decanted loose (not bagged) with containers un-capped, drained and rinsed prior to disposal into the recycling bin.
- **Paper and cardboard:** Based on *BinTrim: Reducing business waste (NSW EPA, 2017)*, Paper and cardboard can represent more than 75% of all recyclables generated by various commercial and industrial uses. A separate paper and cardboard collection or cardboard baler is expected to be suitable for the proposed development to reduce waste collection costs and improve resource recovery potential. All cardboard should be flattened prior to placement into a cardboard bin or baler.
- **Film Plastic:** Some industrial uses may produce a significant amount of plastic film waste which can be managed with a separate collection. A 1m³ bag and frame setup or plastic film baler are considered appropriate for film plastic and can be collected by a range of major waste contractors and specialist service providers.
- **Timber Waste:** Pallets (treated and untreated), sawdust and offcuts are common manufacturing waste outputs. Introducing a separate timber organics waste service can reduce size of general waste bin and increase business recycling.
- **Chemical waste:** hazardous wastes such as chemicals, inks etc will be retained in dedicated containers within the premises and removed by a suitably qualified sanitary or waste professional. This type of waste is typically removed by specialist in a small vehicle and so expect the site can be accessed as normal by parking in the loading area or supplied parking spaces.
- **Other (Problem) Waste:** The disposal of hard, bulky, liquid or potentially hazardous wastes shall be organised by the responsible waste contractor as necessary.

5.2 Waste Management and Recycling Method

The flow of **waste** goes from generation to collection through several steps:

1. Waste is temporarily stored at its point of generation in an appropriately sized receptacle, clearly marked for type of waste;
2. Site management are to transfer waste to the designated waste storage area for appropriate disposal into the respective bin.
3. Site management is responsible for maintenance of bins and the waste storage area, ensuring bins are clean and in working order. Cleaning staff and site management are also responsible for switching out full bins and monitoring bin fullness;
4. Site management is to ensure contracts with Council or a private waste contractor, who also ensure appropriate collection scheduling and access is organised to minimise noise, odour, vermin, and visual amenity impacts to staff, visitors and the public.

5.3 Hazardous Waste Management

The daily activities of the site generate used screen-printing ink and solvent containers which are classified as hazardous chemicals.

The transport and disposal of hazardous waste is regulated by state environmental authorities and must be tracked from collection and transport through to disposal at licensed facilities using compliant chain of responsibility procedures. Under these laws, it is a business' responsibility to ensure their hazardous waste is being transported and disposed of by certified professionals to licensed facilities following these procedures.

The storage and disposal of hazardous wastes on the site are to abide by the following procedures:

- Keep used chemical containers separate from other waste streams on the property.
- Classify all hazardous waste.
- Wash chemical containers thoroughly within wastewater bay before disposal.
- Dispose of chemical containers through a licensed waste contractor.
- Track transportation of chemical waste containers from premises to licenced facility.

Chemicals used onsite include thinners, white spirits and ink. In the instance of a chemical spillage, site management follows the below procedure:

1. Mop spillage using rags,
2. Dispose of rags in clearly signed containers separate from general waste,
3. Temporarily store chemical rag containers in a designated ventilated area, and
4. Dispose of chemical containers via Cleanaway Hazardous Chemical Removals.

5.4 Management System and Responsibilities

The site manager will be responsible for the management of waste at the site. Should there be any issues that impact on the operational efficiency, safety and suitability of waste management, management will be responsible for making any necessary changes, responsibilities include:

- Using this WMP to inform waste management operations, design and infrastructure;
- Providing educational materials and information on sorting methods for recycled waste, awareness of waste management procedures for waste minimisation and resource recovery;
- Maintaining a valid and current contract with a licensed waste service provider for waste and recycling collection and disposal;
- Making information available to residents and visitors about waste management procedures;
- Organising, maintaining and cleaning bins as part of a regular maintenance schedule;
- Manoeuvring bins to specified onsite collection point prior to and following scheduled collection of waste bins;
- Organising bulky waste collections as required;
- Ensuring bin allocation and waste/recycling collection frequency is adequate. Requesting additional infrastructure or services where necessary; and
- Monitoring any vermin and pest issues and arranging appropriate controls (traps or fumigating) and maintenance of doors or other points of potential entry.

5.5 Collection Method and Loading Areas

IVE hold existing waste management contracts with Wasteflex and Evoro. These contractors collectively manage all waste streams generated at existing operations such as the existing Granville, Silverwater and Homebush sites. It is expected that IVE will engage in a waste contract tender process prior to the commencement of operations at the WH8 site, to select a suitably qualified contractor (or contractors) to service waste generated from the proposed use.

All waste streams generated and stored at the site will be serviced from the designated loading dock (see Appendix A and Figure 2). The site will be serviced by a number of waste collection vehicle types, including rear lift, front lift, hook lift and flatbed trucks. In general, vehicles will be Medium Rigid Vehicles (MRVs) or Heavy Rigid Vehicles (HRVs) in terms of size, which is suitably accommodated by vehicle access provided through the site.

Table 8 details the different collection components and specifications in accordance with the MRPDGP 2021.

Table 8: Collection points and loading areas requirements and specification

Component	Requirement	Specification
Collection point	Allow safe waste collection and loading operations	<ul style="list-style-type: none"> - Adequate clearance and manoeuvring space; - Sufficient clearance for the safe handling of materials and equipment; and - Sectioned loading bay does not impede upon traffic and pedestrian safety.
Vehicle manoeuvring and loading space	Truck space for adequate lift clearance, manoeuvring and operation for a contractor collection vehicle	<ul style="list-style-type: none"> - Collection from the site waste storage / loading area by hook lift, front lift, rear lift and flatbed style heavy vehicles; - Adequate loading bay dimensions to not impede lift clearances; - Operational clearance for truck manoeuvring in a forward direction; and - The provision of space clear of vehicle parking spaces (level and free of obstructions).
Operating times	Appropriate collection times to limit noise and traffic disturbance	<ul style="list-style-type: none"> - Collection times will be arranged during off-peak times to ensure minimal disturbance to pedestrians and visitors.

5.6 Waste and Recycling Storage Areas

The waste storage area will provide centralised storage that has adequate capacity to receive and store the maximum likely generation of waste generated at the site. In accordance with the MRMRPDCP 2021, it is recommended the bin storage areas be designed with the following considerations:

- Waste storage and collection areas should be:
 - Flexible in their design to allow for future changes in the activities and tenancies;
 - Located away from primary street frontages, where applicable;
 - Suitably screened from public areas to minimise noise, odour and visual impacts;
 - Designed and located to consider possible traffic hazards (pedestrian/vehicular);
 - Accessible to collection vehicles;
 - Compatible with the collection service(s) to be used; and
 - Designed to encourage the separation of materials.
- The design of waste storage and collection areas must consider:
 - Separating dry recyclables for recycling on-site, including containers, paper, cardboard and toners for printers and photocopiers;
 - Providing refrigerated garbage rooms where there are large quantities of perishable wastes and infrequent collections; and
 - Placing clinical or hazardous and liquid waste in specialised containment bins for collection by specialised services.

5.7 Signage

Signage that promotes resource recovery, waste minimisation, safety and amenity follows the Australian Standard for safety signs for the occupational environment (Standards Australia, 1994).

Signage will be designed to consider language and non-English speaking backgrounds, vision impairment and accessibility. Illustrative graphics must form a minimum 50% of the area of the signage. Signage is to be prominently posted in the waste room indicating:

- Details regarding acceptable recyclables;
- Recyclables are to be decanted loose (not bagged);

- *No standing* and *danger* warnings apply to the area surrounding the waste storage area;
- Contact details for arranging the disposal of bulky items; and
- The area is to be kept tidy.

Standard signage requirements and guidance for application apply (see Appendix A).

5.8 Prevention of Pollution and Litter Reduction

To minimise dispersion of litter and prevent pollution (to water and land via contamination of runoff, dust and hazardous materials), building management and the site cleaning staff will also be responsible for:

- Maintenance of open and common site areas;
- Ensuring waste areas are well maintained and kept clean;
- Securing the waste storage area from vandalism and the escape of litter;
- Identification and appropriate disposal of goods with hazardous material content (paints, e-waste, fluorescent tubes);
- Taking action to prevent dumping and unauthorised use of waste areas; and
- Requiring contractors to clean up any spillage that may occur during waste servicing or other work.

6 Access Requirements and Limitations

6.1 Best practice requirements

The following best practice methods shall be incorporated where relevant/practicable to ensure site waste management is completed safely and effectively:

- Operational staff shall ensure that bins are not overfilled or overloaded.
- Waste incineration devices are not permitted, and any offsite waste treatment and disposal shall be carried-out in accordance with relevant regulatory requirements at facilities licenced to do so.
- For bin traffic areas, should any ramp gradients be present, bin weight, and/or distance can affect the ease/safety of bin transfers. In the case of a potential safety concern, use of a suitable tug or cart will be considered.
- The operator and contracted WSPs shall observe all relevant WHS legislation, regulations, and guidelines. The relevant entity shall define their tasks.
- All staff/contractors should be provided with equipment manuals, training, health and safety procedures, risk assessments, and adequate personal protective equipment (PPE) to control/minimise risks/hazards associated with all waste management activities.

6.2 Limitations

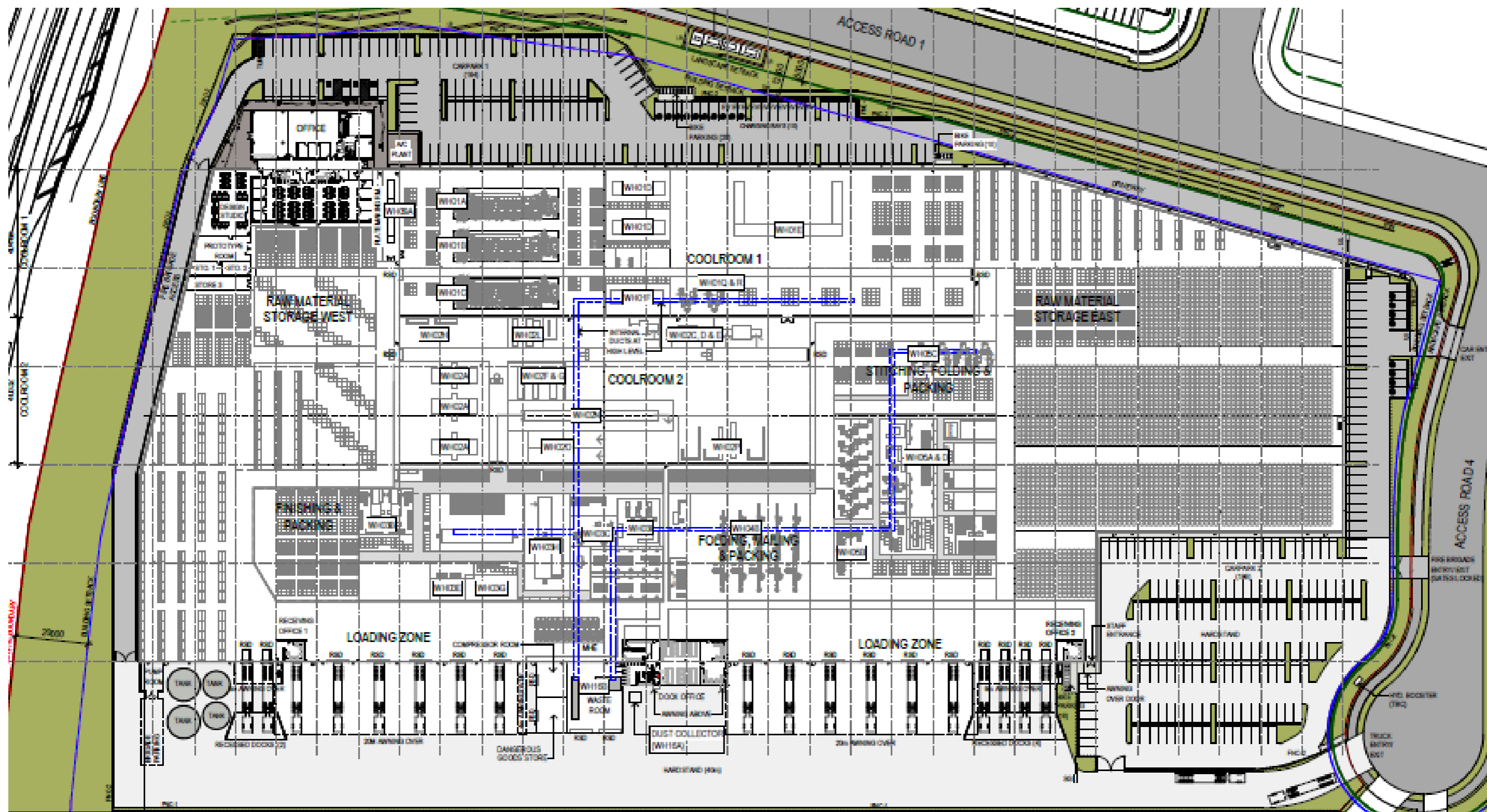
This report is based on the following conditions:

- Waste generation figures outlined in the demolition and construction sections are approximate only and should be confirmed by building and demolition contractors through demolition and construction operations.
- Operational waste generation figures are estimated based on existing data supplied by the proposed operator of the site IVE, based on existing similar operating sites. Actual waste generation for the site once operational should be confirmed by IVE and the contracted waste service provider(s) to ensure waste storage and servicing arrangements are sufficient for the ongoing operation of the site.
- The figures presented in this report are estimates only. The actual amount of waste will depend on the development's occupancy type, occupancy rate, waste generation profile, the user's disposition toward waste and recycling and the overall approach to waste management maintained at the site. The operator will adjust their waste management needs based on actual waste and recycling volumes experienced through regular operation (if the actual volumes of the streams are greater than estimated, then the number of bins and/or the number of collections per week shall be increased).
- This report shall not be used to determine/forecast operational costs, or to prepare feasibility studies, or to document operational/safety procedures.

References

- Australian Department of Sustainability, Environment Water, Population and Communities (2011) Construction and Demolition Waste Guide - Recycling and Re-use Across the Supply Chain.
- Australian Standards 4123.7 Mobile Waste Containers.
- Penrith Development Control Plan 2014
- Penrith Local Environmental Plan 2010
- Mamre Road Precinct Development Control Plan 2021
- NSW EPA (2012) Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities.
- NSW EPA (2021) NSW Waste and Sustainable Materials Strategy 2041.
- NSW EPA (2014) Waste Classification Guidelines.
- NSW EPA (2016) Recycling Signs, Posters and Symbols. Available at: <http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm>.
- NSW EPA (2019) Better Practice Guide for Resource Recovery in Residential Developments.
- NSW Government (1979) Environmental Planning and Assessment Act.
- NSW Government (1997) Protection of the Environment Operations Act.
- NSW Government (2000) Environmental Planning and Assessment Regulation.
- NSW Government (2001) The Waste Avoidance and Resource Recovery Act

Appendix A Revised Concept Masterplan



Source: SBA Architects, 2025.

Appendix C Standard Signage

Waste Signage

Signs for garbage, recycling and organics bins should comply with the standard signs promoted by the NSW EPA.

Standard symbols for use in signage, bin facade and educational materials are promoted through the NSW Environment Protection Authority. They are available for download from the NSW EPA website (NSW EPA 2016b), in black and white and colour versions. The Australian Standard series AS 4123 (Part 7) details colours for mobile waste containers (Standards Australia 2008).

Figure 3: Examples of standard signage for bin uses



Safety Signs

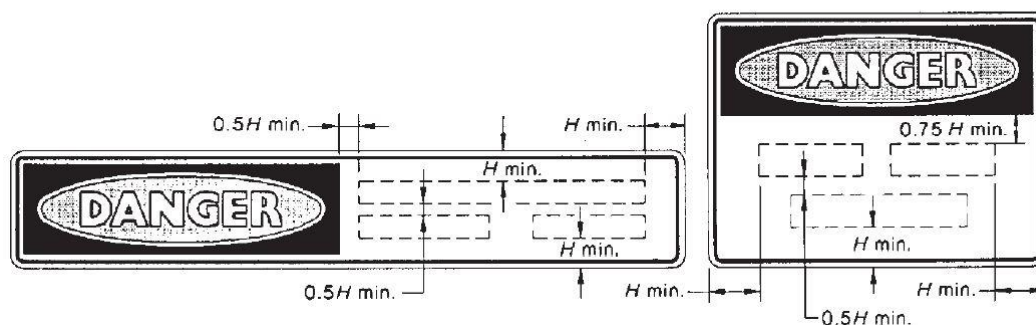
The design and use of safety signs for waste and recycling rooms and enclosures should comply with AS 1319 (Standards Australia 1994). Safety signs should be used to regulate, and control safety related to behaviour, warn of hazards and provide emergency information, including fire protection information. Below are some examples. Clear and easy to read 'NO STANDING' and 'DANGER' warning signs must be fixed to the external face of each waste and recycling room where appropriate.

Figure 4: Example and layout of safety signage



(d) Horizontal

FIGURE D5 TYPICAL ARRANGEMENTS OF DANGER SIGNS



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